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Publications

# The North Pickering Project

## COMMUNITY DESIGN

preliminary outline of  
options for the physical  
design of the new  
community



Ministry of  
Housing

Ontario

plantown  
consultants limited

BACKGROUND **1**  
PAPER

*This report was prepared as background material in the planning of North Pickering Planning Area and does not necessarily constitute a recommendation of the Ministry of Housing nor approval of the Government of Ontario.*

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# **BACKGROUND PAPER**

**on:  
COMMUNITY  
DESIGN**

**preliminary outline of  
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**JUNE 1974**

plantown  
consultants limited





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## A. SCOPE OF PHYSICAL DESIGN OPTIONS

The Plan for Development of the New Community will emerge in response to the complete spectrum of social, economic and physical perceptions developed by the project team. It is perhaps safe to say that the greatest range of options will be available in the way in which those factors become expressed in alternative community designs. This will involve consideration of such matters as:

1. possible arrangements of land use patterns with respect to the degree of concentration, dispersal, separation or mixing of residential, commercial and industrial uses;
2. appropriate road networks in relation to land use patterns and the degree of provision for pedestrian, bicycle, transit and vehicular movements;
3. alternative patterns of distribution of facilities for educational, spiritual, cultural, entertainment, recreational or other social and community services;
4. the balance to be achieved in the provision of open space for active and passive recreational use in relation to the natural features of the site and variations in distribution patterns of employment and housing; and
5. the merging of all factors into a physical design expression that is an appropriate reflection of the anticipated goals, objectives and life styles of the future inhabitants of the New Community.

Three of the more important areas which are relevant to this range of considerations are: housing, shopping and urban form. Some of them are outlined in the following sections. They will be presented in a more comprehensive manner in a subsequent paper as a prelude to the presentation of the Preliminary Community Design Concepts.

## B. HOUSING OPTIONS

The options to which attention must be paid in addressing the matter of housing in the formulation of the Plan for Development are myriad. They include such matters as the following:

1. Housing mix as it relates to the proportion of housing to be provided in single and semi-detached units, low-density, at-ground, multiple family units, moderate density ground-related multiple family units and high density apartments;



2. Conditions of tenure and the possible variations in ownership patterns including individual ownership, mutual ownership in the form of condominium or co-operative units, lease-hold arrangements for dwelling units and composite arrangements involving the ownership of the dwelling and the leasing of the land upon which it is situated;
3. The division of responsibility for housing construction in terms of private and public sector involvement and the extent of non-profit, full recovery or subsidized housing;
4. The responsiveness of housing in quantity, quality and design to variations in socio-economic characteristics of the population and their stage in their life cycle; and
5. The degree to which housing will reflect innovation in social, economic, design or technological terms.

#### C. OPTIONS FOR THE PROVISION OF SHOPPING FACILITIES

Changes in approaches to merchandising on the one hand and shopping habits of consumers on the other have resulted in dramatic changes in the manner in which the shopping function is accommodated in urban centres and expressed in physical terms. As with housing, the options are numerous. Of an extensive list under consideration perhaps some of the more important at the macro level are as follows:

1. The degree to which the provision of shopping facilities should occur as a result of preplanning and initiatives in the public sector or should emerge entirely in response to the market and private sector initiatives.
2. The degree to which shopping should be regarded as an appropriate companion function to other public community services and the attendant need to provide for lesser or greater degrees of integration of multi-purpose facilities of which shopping might occupy a position of only little importance;
3. The degree to which provision should be made for lesser or greater degrees of influence on the provision of shopping facilities by rapid advancements in communications and computer technology with the potential of establishing entirely new approaches to highly centralized highly automated shopping operations;



4. The relative appropriateness of utilizing shopping facilities for a variety of social purposes such as facilitating interpersonal encounters or the exposure of larger segments of the population to specialized cultural or entertainment facilities that they might not otherwise be brought into contact with; and
5. The degree to which the provision of shopping facilities should be structured according to some hierarchical organization of the community, or contrarily, should shopping be disposed in a completely independent, even random manner.

## D. URBAN FORM

### 1. Geometrics

Urban form is not a wilful geometric abstraction. It is determined conjunctively by the natural environment and by human purposes and means. These determinants are immensely complex and varied, and that is why San Francisco is unlike Sangimignano, why Columbia is unlike Cumbernauld and presumably why Pickering is unlike Peking.

Community form is not static in time or in expression. It does not exist in splendid isolation, but is a fascinating interacting component of the larger region, of which it is but a segment.

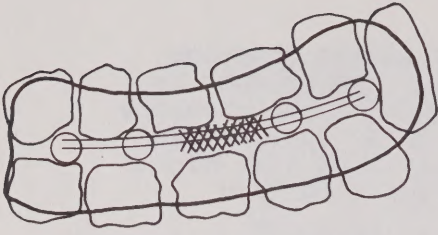
Although its body spiritual may be essentially social, the community is of the earth, earthy because it is, among other things, a built form, and so physically, urban shapes emerge. Whether the physical form is or should be totally accessible to design is a matter of considerable uncertainty.

Figure 1 indicates a few of the configurations that urban form may take. These forms may be properly contemplated only as the resultants of man/nature decisions. If regarded as predetermined form-fixing propositions to be achieved independent of working, playing, learning, shopping and moving about, they become as indefensible as Procrustes' attempts to match his visitors via the rack to the geometry of his bed.

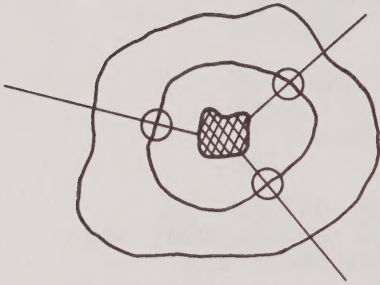
### 2. Spatial Distribution

In addition to matters of overall community geometry, there are options concerning the spatial distribution within the urban form. Figure 2 illustrates 3 alternatives wherein the urban fabric is concentrated, dispersed or clustered.

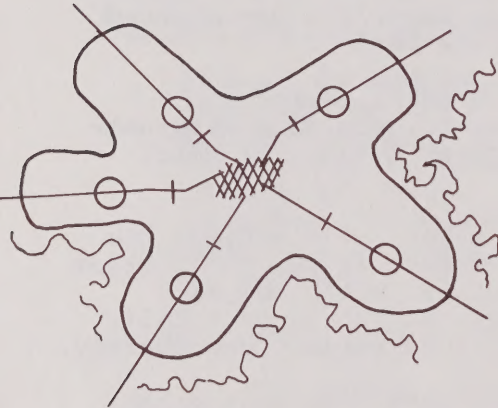
# ALTERNATIVE URBAN FORMS



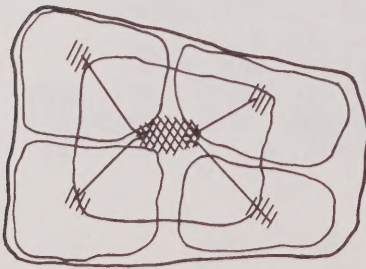
**LINEAR** organized along a spine incorporating major shopping, commercial, social, recreational, cultural and institutional elements of the community and including transportation, communication and servicing provisions.



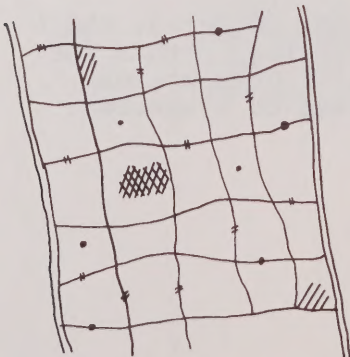
**CONCENTRIC** growth and development outward from a central core.



**FINGER** recognizes radial attraction of central functions and intermeshing of urbanized and natural environments.



**NODAL** involving possibly both central and sub-central concentrations of urban functions including higher density residential configurations.



**GRID** a relatively uniform distribution of urban functions across the network of an equalized circulation pattern resulting in an open-ended and flexible community structure.

Figure 1



If concentrated, there is a consequent salutary increase of lands left in a largely natural condition. The trade-off takes the form of a higher density community and in particular, of a more intensive residential environment, characterized by multiple housing forms. If dispersed, the opposite conditions pertain, - the undisturbed natural environment becomes minimal, but the community is contrived at gentler densities. It might be safe to generalize that in the residential precincts, visual, acoustical and territorial privacy would be increased. It would be profitable to explore quite thoroughly the attributes of these two divergent spatial ideas, - concentration and dispersal. Perhaps the best of both worlds might be within reach.

### 3. Urban Residential Structure

Among new and not so new town forms, a constant theme predominates from Harlow to Radburn, to Faarsta, to Chandigarh, to Columbia, to the Mills both Don and Erin. It is the idea of some sort of primary social cell as the basic physical community or town organizing device. Distinguished urbanists and social observers from Fredrick Osborn and Lewis Mumford to Clarence Stein, Henry Wright and Clarence Perry have extolled the neighbourhood idea. But there are many who question the whole idea as to PTA, too parochial, too out of touch with emerging life styles; in short, an idea whose time has passed. Yet in North Pickering terms, in the Social Development Papers, the search for such a human scale of social and physical validity is evident. The Parkway Belt's justification is "to define and separate communities and thus to provide people with a sense of community". This is an expression of the same cellular proposition farther up the scale of complexity leading from neighbourhood to district (a constellation of neighbourhoods), to overall community (a constellation of districts). And vigorous life animates Columbia's neighbourhoods, while the first interesting stirrings of neighbourhood-scaled activity already animate the early beginnings of Erin Mills.

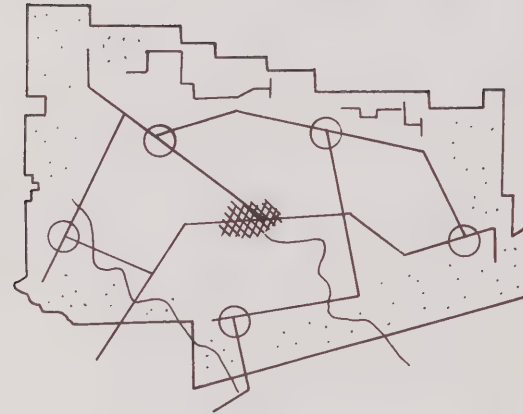
Yet Hooke or Milton Keynes or to some degree Cumbernauld, have taken a different attitude to social and physical structuring of the town. Thus the validity or invalidity of the cellular approach, whatever its hierarchial couplings may be, is a prime question the answer to which must make a major contribution to the urban form of the new community.



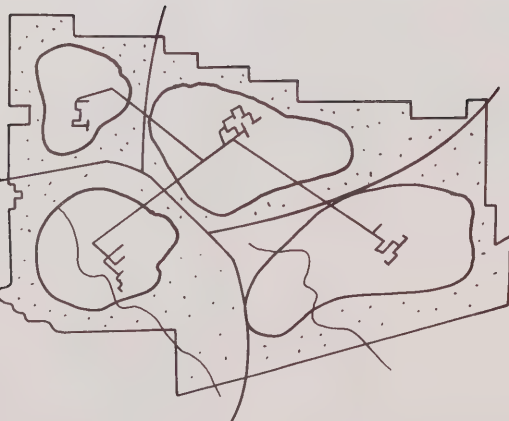
# SPATIAL DISTRIBUTION of URBAN FORMS



CONCENTRATED PATTERN



DISPERSED PATTERN



CLUSTERED PATTERN

The last three pages of sketches attempt to set out visually in broad and probably over-simplified fashion these issues. As a beginning, Figure 3 illustrates the conventional or classic neighbourhood unit theory which has survived in various forms from Perry's first formulations fifty years ago.

Figure 4 shows the almost geological evolution of the cellular residential structure from precinct to neighbourhood to district to community and on to larger implications of regional urban form. This hierarchy raises considerations not only of the appropriateness of the neighbourhood idea, but also of the parallel social and physical rational nature of district (sub-community) and community. In the opposite direction of growth from decreasing order of precinct and eventually of individual buildings. Here questions of territoriality or "defensible space" as explored by Oscar Newman and Robert Somers arise.

Figure 5 presents some indication of how the four basic configurations, - precinct, neighbourhood, district and community, may be contrived in various combinations, each presumably with strengths and weaknesses. The sketch also notes the possibility of a homogeneous undifferentiated and largely non-structure urban form.

In all this, it could be argued that design concepts might best start at the microcosm of precinct and neighbourhood, as well as at the impressive dimensions of total community form.

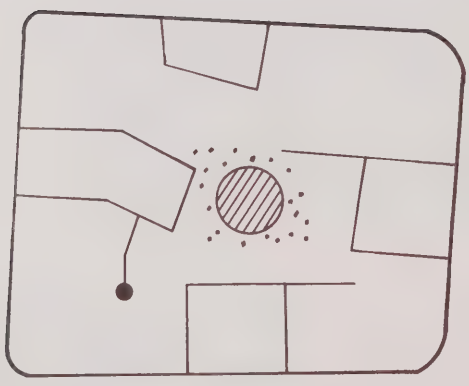
It might be in order to conclude these notes, which have perhaps been all too preoccupied with urban and cellular community structure, with the cautionary note that many perceptive and experienced sociologists and social observers have stressed the idea that the deterministic link between physical environments and social behaviour can too easily be exaggerated by planners and architects. Maurice Brody, the distinguished British sociologist, reminds us that neighbourhood structure does not ensure neighbourliness.

# CONVENTIONAL or CLASSIC NEIGHBOURHOOD THEORY

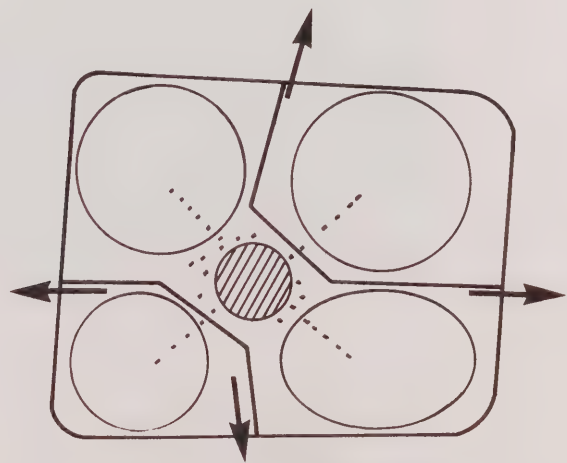
- 1. frequently elementary school centred
- 2. size determined by elementary school; currently approx. 4,000 to 5,000 p. or 1,000 to 1,500 d.u.
- 3. defined boundaries ( natural or man-made ) to enhance identification
- 4. neighbourhood usually focuses around elementary school, neighbourhood park, corner store, child care and neighbourhood building



- 5. vehicular circulation system involving collector streets and residential streets
- 6. through or extraneous traffic does not penetrate the neighbourhood
- 7. pedestrian circulation system connects internally to the neighbourhood destinations (school, park, corner store, nursery) and externally to public transit, adjacent neighbourhoods and other external destinations
- 8. a diversified range of dwelling types



no internal collector



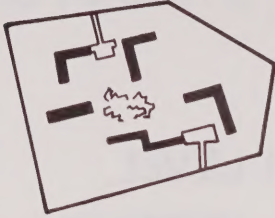
discontinuous collector

## ALTERNATIVES

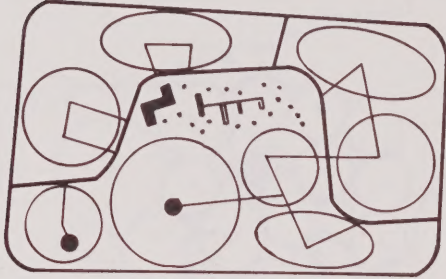
Figure 3



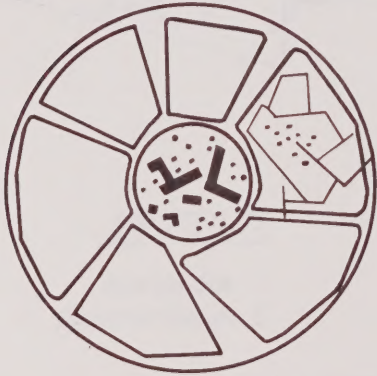
# CELLULAR URBAN RESIDENTIAL STRUCTURE



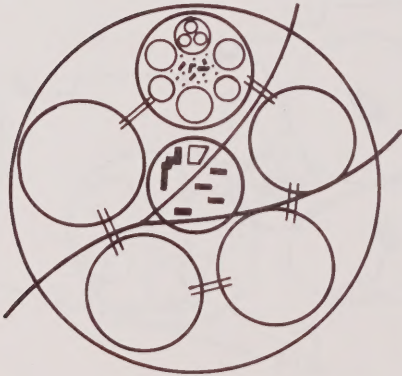
1. **PRECINCT** a modest sized group of dwellings, possibly with shared facilities and spaces. Socially and physically the smallest design component involving perhaps 100 units or 3 to 4 hundred persons.



2. **NEIGHBOURHOOD** 1000 to 1500 dwellings or 4000 to 5000 persons, usually grouped about appropriate social recreation, educational and child care facilities



3. **DISTRICT** clusters of 10 or 12 neighbourhoods, or 35,000 to 50,000 persons, about a sub-centre including major shopping, secondary and post-secondary education facilities, district wide social-recreational-cultural provisions, library and church components and multiple residential environments



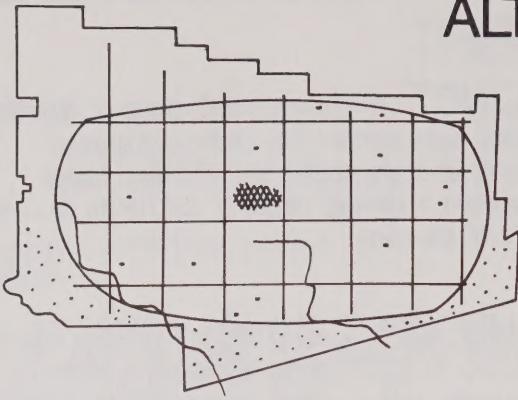
4. **TOWN or CITY** a constellation of districts surround the community or town centre. At the centre are located regional shopping, major educational institutional cultural and recreational activities and higher density residential configurations



5. **THE REGIONAL URBAN FORM** the Parkway Belt is intended to define and separate communities thus enhancing community identity

# ALTERNATIVE RESIDENTIAL URBAN STRUCTURE

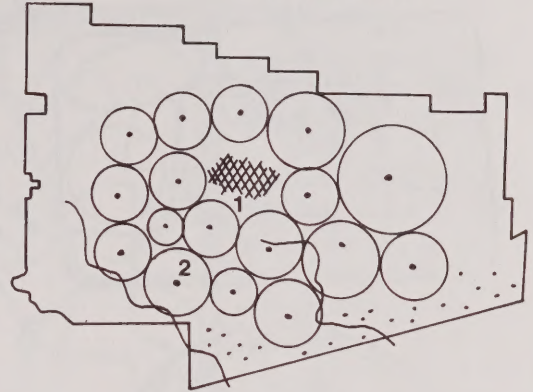
HOMOGENEOUS



Centre  
Residential  
Environment

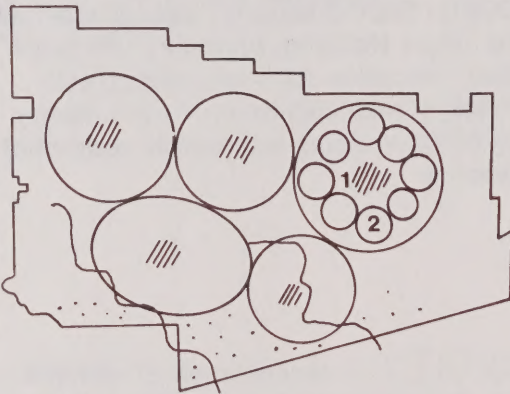
## I. LEVEL

undifferentiated



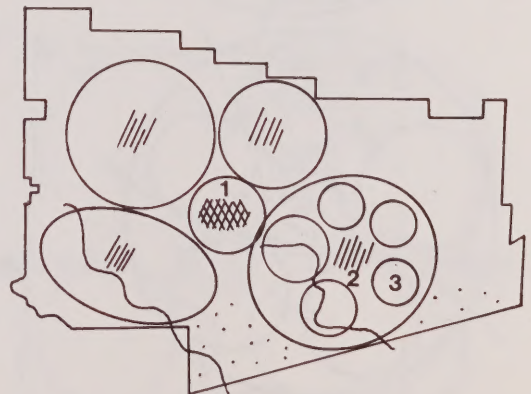
## 2. LEVEL

1. centre
2. neighbourhoods



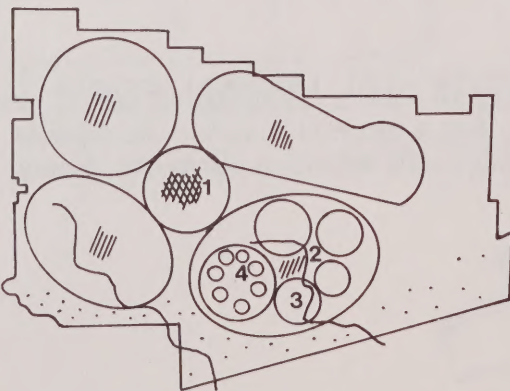
## 2. LEVEL

1. sub-centres
2. neighbourhoods



## 3. LEVEL

1. centre
2. sub-centres
3. neighbourhoods



## 4. LEVEL

1. centre
2. sub-centres
3. neighbourhoods
4. precincts

STRUCTURES

CELLULAR

Figure 5







Ontario

Ministry of  
Housing

Hon. Donald R. Irvine, *Minister*  
R. M. Warren, *Deputy Minister*